



# Unified Migration Data Analytical System

*EMN Georgia and EMN Estonia Joint Conference*

*'Advancing Data-Driven Decision-Making in Migration Management'*

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Data-Driven  
Decision-  
Making  
**in General**

Purpose /  
Benefits of  
DDDM

Elements of  
DDDM  
**Common  
matters**

UMAS –  
Georgian  
Solution

Data-Driven  
Decision-  
Making  
**in General**



“Data are the lifeblood of decision-making. The importance of quality, accessible, disaggregated, reliable and timely data to inform policies, action and public opinion is well recognized and highlighted in multiple international frameworks.”

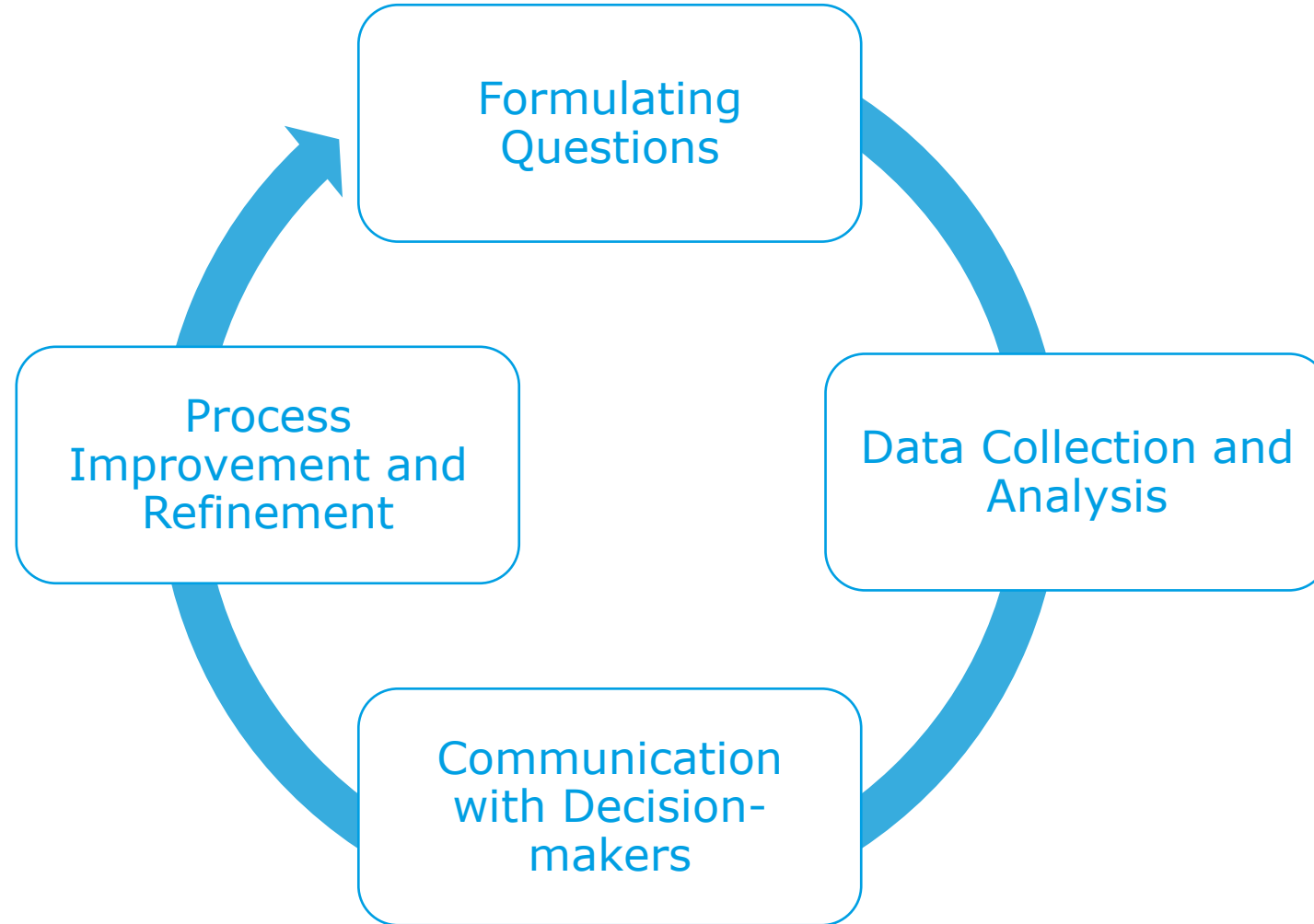
- (IOM, Migration Data Strategy, 2021)

Data-Driven  
Decision-  
Making

in General

- **Data** are unstructured facts that have no context and no content, and represent the values of variables, **e.g.:** *male, 57, lawyer.*
- **Information** is a set of data in context, **e.g.:** *the number of employees of an organization by gender, age and position.*
- **Knowledge** is a structured information that is used to answer certain questions, **e.g.:** *60% of the lawyers employed in the organization are over 30 and 70% of them are female.*

Data-Driven  
Decision-  
Making  
**in General**



Purpose /  
Benefits of  
DDDM

## Purpose of DDDM

Data-driven decision-making (DDDM) allows making decisions based on data as opposed to **intuition**, **observation**, or **guesswork**.

- ✓ Objective
- ✓ Measurable
- ✓ Clear

Purpose /  
Benefits of  
DDDM

## Benefits of DDDM

- **Anticipation and planning:** using data in the design of policies and subsequent action; anticipation of possible policy change and forecasting of needs
- **Evaluation and monitoring:** the use of data in measuring impact, auditing decisions and monitoring performance

Elements of  
DDDM

**Common  
matters**

## Data

- **Distributed** among different state agencies
  - Each agency collects and processes data within its own scope of operation
  - However, for purpose broader statistics, this data owned by different agencies is usually not inter-linked
- **Unstandardized**
  - There is no common standard for the collection of data fields mandatory for all migration related agencies
- **Data quality**



Elements of  
DDDM

## Stakeholder Management

- Agencies united around the **same idea**
  - Migration data should be collected and processed in coordination
- **CENTRAL** body / group
  - responsible for administration and coordination
- **Legal Framework**
  - Based on higher legislative level
- **Practical coordination**
  - MoUs among the stakeholders

# Data Processing Environment

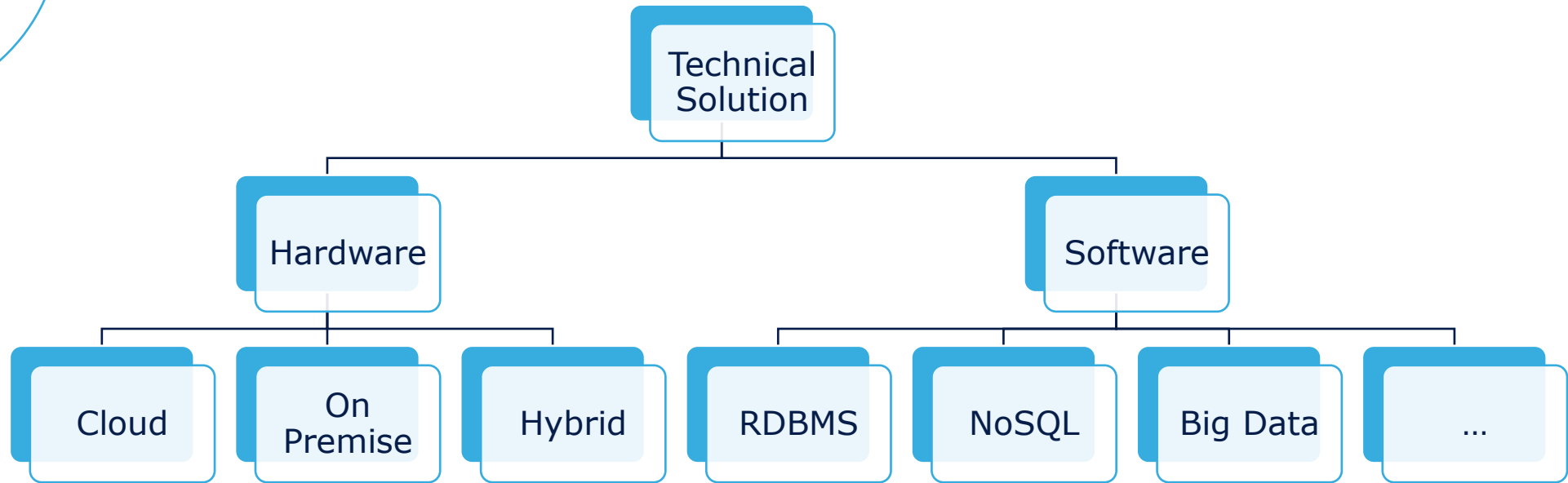
Elements of  
DDDM

Technical  
Solution

Conceptual  
Solution

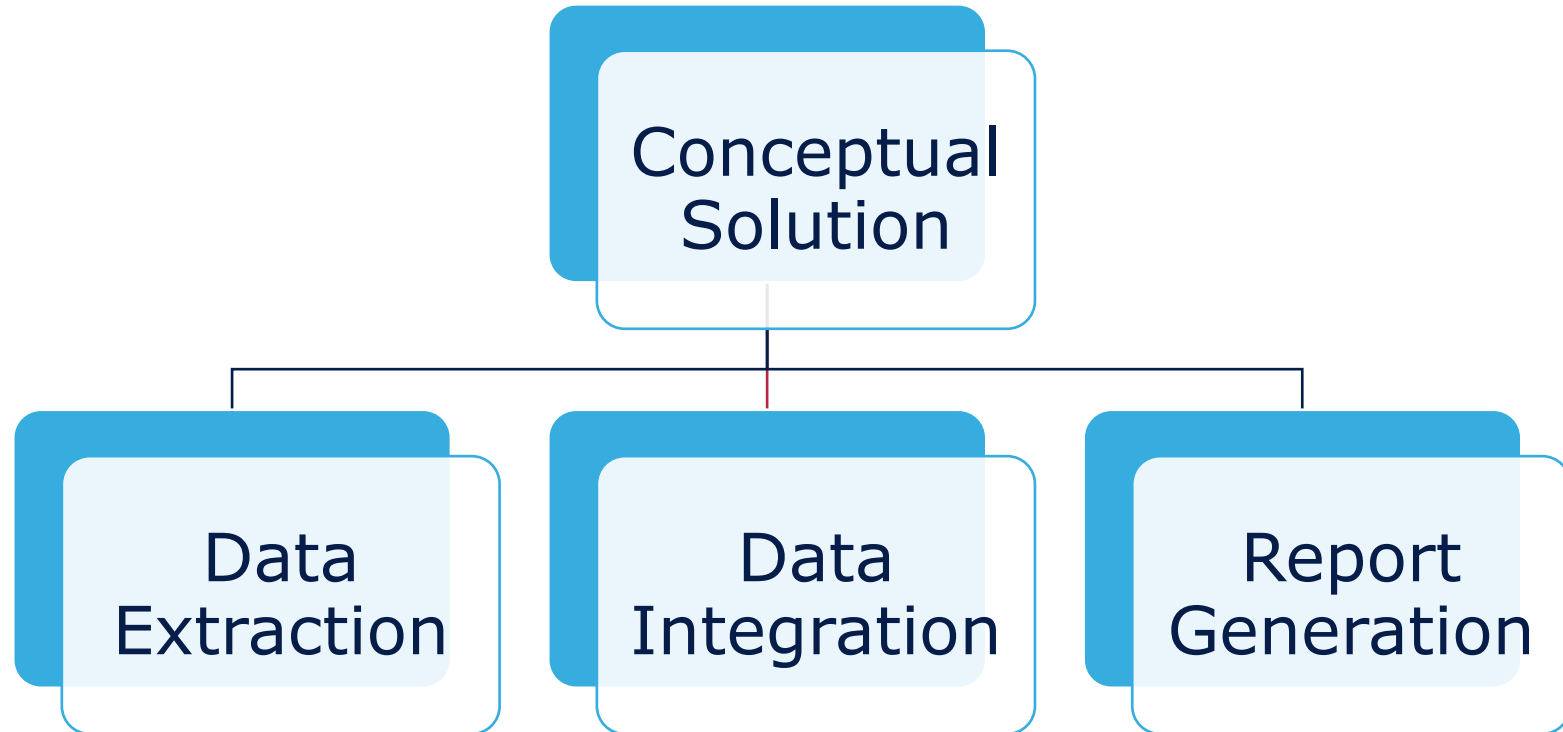
# Data Processing Environment

Elements of  
DDDM



# Data Processing Environment

Elements of  
DDDM



# UMAS – Georgian Solution

Niko Nikuradze

UMAS –  
Georgian  
Solution

## Introduction

- Migration data is **distributed** in operational databases of several institutions
- Each institution runs its **own statistics**
- However, institutions need:
  - access to the statistics **of other institutions** and
  - statistics based on data that results from integration of several sources (**cross-institutional reports**)

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## Project UMAS

- In **2014**, upon preliminary analysis and further consulting the **PDPI**, it was agreed to collect the distributed data **for analytical purposes** in a single space
- The name of this place is **Unified Migration Data Analytical System (UMAS)**
- The first version of UMAS went into operation **in 2018** (5 Data Sources)
- UMAS is continuously being upgraded and integrates different data sources

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## Data Processing Environment

- **Big Data Infrastructure** - currently, structured data is processed, although technology allows us to process unstructured data (social-media, etc.)
- Data flow **automatization**: less human involvement, reducing maintenance costs and probability of errors
- Report Delivery Platform (**Tableau**)
- Data **On Premise**



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## Data Quality

- Data quality can only be improved **within the sources**
- UMAS can provide with **recommendations**
- The main source of recommendations are analytical reports and data profiling results
- **Check Reports** - a set of reports that are periodically checked for matches
- Helps identify changes in **business rules**

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## Stakeholder Management

- Business and Technical **Owners** of Data Sources - clarification of questions regarding business rules and technical issues
- **Users** of analytical reports
- **UMAS Working Group** - Periodical meetings to discuss the maintenance and development of the UMAS

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## UMAS and DDDM

- The UMAS end product is set of **analytical reports**
- The UMAS generates periodically updated **standard** and **ad hoc reports**
- The information obtained from the reports produces **new questions** and **new reports**

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